

a first set time interval  $T_1$ , which is parallel to the motion vector  $MV1$  at the second set time interval  $T_2$  and different in magnitude from the motion vector  $MV1$  at the second set time interval  $T_2$  by a value determined by  $MV1 \cdot T_1/T_2$ ; and

- (c) calculating the motion compensation of the input image from both of (i) the motion vector  $MV1$  between the input image and said one reference image and (ii) the motion vector  $MV2$  between the at least two reference images of the plurality of reference images.

2. A method of determining motion compensation for an input image from a motion vector between the input image and a plurality of reference images, said method comprising the steps of:

- (a) detecting a motion vector  $MV1$  between the input image and one reference image  $R1$  of said plurality of reference images at a second set time interval  $T_2$ ;
- (b) providing a motion vector  $MV3$  between the reference image  $R1$  and another reference image  $R2$  of said plurality of reference images at a first set time interval  $T_1$ , said motion vector  $MV3$  being parallel to the motion vector  $MV1$  and different in magnitude from the motion vector  $MV1$  by a value determined by  $MV1 \cdot T_1/T_2$ ;
- (c) obtaining a motion vector  $MV2$  between the input image and the another reference image  $R2$  at a third set time interval  $T_3$  from a sum of the motion vector  $MV1$  and the motion vector  $MV3$ , and calculating respective pixels corresponding to the motion vector  $MV1$  and the motion vector  $MV2$  from pixels of the reference image  $R1$  and the reference image  $R2$  corresponding to the motion vector  $MV1$  and the motion vector  $MV2$  or from pixels positioned peripherally of the pixels of the reference image  $R1$  and the reference image  $R2$ ; and

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(d) calculating motion-compensated pixel values from the calculated pixels of the reference images.

3. A method of obtaining a motion-compensated image from a motion vector between the motion-compensated image and a plurality of reference images, said method comprising the steps of:

(a) obtaining a motion vector MV1 between the motion-compensated image and one reference image R1 of said plurality of reference images at a second set time interval  $T_2$ ;

(b) providing a motion vector MV3 between the reference image R1 and another reference image R2 of said plurality of reference images at a first set time interval  $T_1$ , which is parallel to the motion vector MV1 and different in magnitude from the motion vector MV1 by a value determined by  $MV1 \cdot T_1 / T_2$ ;

(c) obtaining a motion vector MV2 between the motion-compensated image and said another reference image R2 at a third set time interval  $T_3$  from a sum of the motion vector MV1 and the motion vector MV3, and calculating respective pixels corresponding to the motion vector MV1 and the motion vector MV2 from pixels of the reference image R1 and the reference image R2 corresponding to the motion vector MV1 and the motion vector MV2 or from pixels positioned peripherally of the pixels of the reference image R1 and the reference image R2; and

(d) calculating motion-compensated pixel values from the calculated pixels of the reference images to obtain the motion-compensated image.

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4. A method in accordance with claim 3, wherein said motion vector MV1 between the motion-compensated image and said one reference image R1 of said plurality of reference images is calculated from a motion of at least one block unit at said second set time interval, said at least one block unit being a part of said input image and comprising a plurality of pixels.

5. A method in accordance with claim 3, wherein step (c) comprises obtaining said motion vector MV2 from a mean of said motion vector MV1 and said motion vector MV3, and said pixels positioned peripherally are valued in accordance with an average weighting inversely proportional to distance from pixels of the reference image R1 and the reference image R2.

6. A method of determining motion compensation for an input image, said method comprising the steps of:

(a) providing a first motion vector MV1 between the input image and a reference image part r1 of one reference image R1 of a plurality of reference images at a second set time interval T2 between said input image and said one reference image R1;

(b) calculating a second motion vector MV2 between the input image and a reference image part r2 of another reference image R2 of said plurality of reference images R2, said second motion vector MV2 being parallel to said first motion vector MV1 and having a magnitude satisfying the relation  $MV2 = MV1 \cdot (T1/T2)$ ;

(c) calculating pixel values of said reference image parts r1 and r2 from peripheral pixels at positions corresponding to said first and second motion vectors MV1 and MV2, wherein said reference images R1 and R2 are previous to said input image in a time sequence; and

(d) calculating motion compensated pixel values of said input image from said calculated pixel values of said reference image parts r1 and r2 to determine said motion compensation.

7. A method for determining a motion-compensated image, said method comprising the steps of:

(a) providing a first motion vector MV1 between the motion-compensated image and a reference image part r1 of one reference image R1 of

a plurality of reference images at a second set time interval T2 between said motion compensated image and said one reference image R1;

(b) calculating a second motion vector MV2 between the motion-compensated image and a reference image part r2 of another reference image R2 of said plurality of reference images at a first set time interval T1 between said motion compensated image and said another reference image R2, said second motion vector MV2 being parallel to said first motion vector MV1 and having a magnitude satisfying the relation  $MV2 = MV1 \cdot (T1/T2)$ ;

(c) calculating pixel values of said reference image parts r1 and r2 from peripheral pixels at positions corresponding to said first and second motion vectors MV1 and MV2, wherein said reference images R1 and R2 are previous to said motion-compensated image in a time sequence; and

(d) calculating motion-compensated pixel values from said calculated pixel values of said reference image parts r1 and r2 to determine said motion-compensated image.

8. An apparatus for determining motion compensation for an input image, said apparatus comprising:

(a) means for providing a first motion vector MV1 between the input image and a reference image part r1 of one reference image R1 of a plurality of reference images at a second set time interval T2 between said input image and said one reference image R1;

(b) means for calculating a second motion vector MV2 between the input image and a reference image part r2 of another reference image R2 of said plurality of reference images R2, said second motion vector MV2 being parallel to said first motion vector MV1 and having a magnitude satisfying the relation  $MV2 = MV1 \cdot (T1/T2)$ ;

(c) means for calculating pixel values of said reference image parts r1 and r2 from peripheral pixels at positions corresponding to said first and second motion vectors MV1 and MV2, wherein said reference images R1 and R2 are previous to said input image in a time sequence; and

(d) means for calculating motion-compensated pixel values of said input image from said calculated pixel values of said reference image parts r1 and r2 to determine said motion compensation.

9. An apparatus for determining a motion-compensated image, said apparatus comprising:

(a) means for providing a first motion vector MV1 between the motion-compensated image and a

reference image part r1 of one reference image R1 of a plurality of reference images at a second set time interval T2 between said motion compensated image and said one reference image R1;

(b) means for calculating a second motion vector MV2 between the motion-compensated image and a reference image part r2 of another reference image R2 of said plurality of reference images at a first set time interval T1 between said motion compensated image and said another reference image R2, said second motion vector MV2 being parallel to said first motion vector MV1 and having a magnitude satisfying the relation  $MV2 = MV1 \cdot (T1/T2)$ ;

(c) means for calculating pixel values of said reference image parts r1 and r2 from peripheral pixels at positions corresponding to said first and second motion vectors MV1 and MV2, wherein said reference images R1 and R2 are previous to said motion-compensated image in a time sequence; and

(d) means for calculating motion-compensated pixel values from said calculated pixel values of said reference image parts r1 and r2 to determine said motion-compensated image.